REPLY (ARGUMENT)

To: Examiner of the Patent Office

1. Identification of the International Application

PCT/JP02/08389

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4. Date of Notification

14.01.03 (January 14, 2003)

5. Subject Matter of Reply (Argument)

Letter Explaining Amendments

This is reply to the Written Opinion dated 14.01.03 (January 14, 2003). Please amend the above-identified international application as follows.

Enclosed herewith are substitute pages 3, 3/1, 4, 4/1 and 20, 20/1, 21, 21/1, 22, 22/1, which should be entered in the case in lieu of previous pages 3, 4 and 20-22.

Summary of Amendments to Claims

Entry of substitute pages 20, 20/1, 21, 21/1, 22, 22/1 in place of originally submitted pages 20-22 replaces previously submitted claims 1-7 with claims 1-7.

Remarks Concerning Amendments to Claims

Independent claims 1 and 5 are amended to include as an indispensable component "a resilient arm member" for supporting at least one probe thereon. Further, independent claim 1 is amended in a manner which adds the wording "hysteresis" in the components of the stress detection sensor and the deviation detection sensor.

Independent claim 1 and its dependent claims 2 and 4 stand rejected as being anticipated from Citation 1. We first traverse this Examiner's rejection for the following reasons.

The elasticity measuring device of Claim 1 according to the present invention comprises, as sensor means, two sensors, one for a stress detection sensor for detecting the hysteresis of the stress applied to the biological tissue and the other for a deviation detection sensor for detecting the hysteresis of changes in distance of the stress detection sensor with respect to the probe base. We agree that the pressure sensor 21 consisting of a strain guage of the bio-distortion measuring probe of Citation 1 corresponds to the stress detection sensor of the device according to the present invention. However, the device of Citation 1 does not possess the deviation detection sensor which is an indispensable component of the device of the present invention. The structure of Citation 1 other than the pressure sensor 21 is aimed at precisely controlling or measuring the radius of the probe which has a mechanical joint construction and which is expandable or contractable by the revolution of the motor, by making the radius of the probe to have a correlation to the revolution number (revolution amount) of the motor. This structure of Citation 1 is only for measuring well the diameter of the sphincter where the probe is placed. However, after the probe is once placed on the sphincter by this structure, this structure only functions as a mere driving means for expanding or contracting the probe with respect to the sphincter at a predetermined speed (cycle). In other words, in the device of Citation 1, the driving means constituted by the mechanical joint structure applies pressure onto the sphincter with its expansion and contraction at the predetermined speed or cycle and, the pressure of the sphincter at that time can be measured by the pressure sensor 21. However, it should be noted that the fine deviation of the probe itself at that time can never be measured in the device of Citation 1.

To the contrary, the device of the present invention is featured that the probe itself is provided on a free end of a resilient member such as a spring member 15 and that the distance between the free end and the probe base is directly measured by the deviation detection sensor. Namely, in the device of the present invention, there is a great difference from the device of Citation 1 in that, when the sphincter is driven, not only the hysteresis of the stress applied to the biological tissue but also the hysteresis of the deviation of the probe itself are simultaneously measured. In the amended Claims 1 and 5, we have made it clear that the resilient arm member on which the probe itself is provided is one of the indispensable components.

As explained above, since the device of Citation 1 does not possess the deviation detection sensor and the resilient arm member as the constituent elements, the inventions of independent Claim 1 and its dependent Claims 2 - 4 satisfy the requirements of the novelty.

Next, independent Claim 5 and its dependent Claim 6 stand rejected as being obvious over a combination of Citation 1 and Citation 2. We traverse this Examiner's rejection for the following reasons. It is clear that these amended Claims 5 and 6 recite the deviation

detection sensor and the resilient arm member as the indispensable constituent elements. As explained above, the device of Citation 1 does not possess the deviation detection sensor and the resilient arm member as the constituent elements. It is clear from the entire disclosure of the specification of Citation 2 that the inventions of Citation 2, the inventor thereof being the same as the present invention, do not have the deviation detection sensor and the resilient arm member. Therefore, even if Citation 1 and Citation 2 were combined, since the device according to the present invention cannot be achieved, it can be said that the inventions of Claims 5 and 6 are novel and, further, since Citation 1 and Citation 2 neither teach nor suggest the deviation detection sensor and the resilient arm member, it can be said that the inventions of Claims 5 and 6 also satisfy the requirements of inventive step.

Applicant's claims which depend from Claims 1 and 5 should be allowed as depending from an allowable base claim, and for their own distinct features which are neither shown nor suggested in Citations.

Reconsideration on the amended claims and a favorable Preliminary Examination Report are respectfully solicited.